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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,853	03/22/2001	Ahmad Atien	OPR-5 US	3146

24949 7590 09/23/2003

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CANADA

EXAMINER

MENEFEE, JAMES A

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 09/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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CANADA

EXAMINER

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Office Action Summary

Application No.

09/813,853

Applicant(s)

ATIEN, AHMAD

Examiner

James A. Menefee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 9
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on 10 December 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,404,541 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said loop mirror means" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claims 2-11 and 13-14 are also rejected as depending from claim 1.

Claims 1, 3-6, and 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are that in these claims, the location of the output with respect to the rest of the elements is not claimed. The claims are indefinite as there is no suggestion of where the output port should be located.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Islam (US 5,778,014). Islam discloses the claimed invention in Figure 5. Islam discloses a laser source comprising a loop mirror comprising a loop of active fiber and a first coupler having four ports, the fiber loop being connected to a first and second port of the first coupler, at least one pump means (signal in) for injecting pump energy into the loop of active fiber, a plurality of wavelength selective reflection devices 50,52 having different selected wavelengths coupled to at least a third port of the first coupler, where each reflection device reflects a portion of light having the selected wavelength back to the fiber loop, and reflecting a portion of light to an output port (signal out). Regarding claim 13, the reflection devices are fiber Bragg gratings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Islam in view of Huber (US 5,557,442). Islam teaches the limitations of the claims as shown above, but does not disclose an attenuator associated with each reflection device for adjusting an amplitude of light. Huber teaches a system where a coupler has active light off of two of the arms of the coupler, and a plurality of reflection devices associated with attenuators off another arm of the coupler (see Fig. 25). It would have been obvious to one skilled in the art to make the arm in this manner i.e. having the associated attenuators with the reflection devices, in order to filter out unwanted light, as taught by Huber.

Claims 2, 4-10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Islam. Islam teaches the limitations of the claims as shown above, but does not disclose:

Regarding claim 2, this claim is merely making the output of the laser system behind the reflectors, which differs from Islam as Islam has the output on the opposing side of the active medium. The reflectors 50,52 of Islam are highly reflective to the lasing wavelength, and are therefore transmissive to other wavelengths (i.e. the output wavelength). It is well known in laser systems to take the output from a reflector that is transmissive to the output wavelength and reflective to the cavity wavelength. Thus, it would have been obvious to one skilled in the art to make a rearrangement of parts and rearrange the system so that the output is taken from behind the reflectors 50,52.

Regarding claim 4, it is not disclosed that the coupler is a 3 db coupler. 3 db couplers are very well known in the art as used as couplers in fiber systems. It would have been obvious to

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one skilled in the art to use a 3 db coupler as the coupler because this type of coupler often has improved loss characteristics over other types of coupler, as is well known.

Regarding claim 5 and 8-10, these claims are merely taking branches as in claim 2 and arranging a plurality of them off of the couplers in various manners. It would have been obvious to one skilled in the art to arrange the system in this manner so that there is an ease of replacing the branches in the system, i.e. if a particular branch were faulty, one would not have to replace the entire system, but merely that particular branch, as the branches are all connected by couplers and thus easily interchanged.

Regarding claims 6 and 7, the claims are similar to claims 1 and 2 except parallel reflectors replace the series reflectors. Replacing the series gratings of Islam with parallel gratings would provide the same result. Thus, it would have been an obvious art known substitution to substitute parallel gratings for the series gratings of Islam.

Regarding claim 12, it is not disclosed that there is a source combining means for combining the laser outputs from a number of the systems of claim 1. However, means for combining a number of laser sources are well known in the art. It would have been obvious to one skilled in the art to combine a number of the systems of claim 1 and combine their outputs in order to form, for example, a WDM system, as is well known.

Regarding claim 14, it is not disclosed that the reflective elements are tunable filters. However, a tunable filter would accomplish the same purpose as the gratings of Islam, i.e. would be able to reflect at a tunable frequency and transmit at other frequencies. Thus, using a tunable filter in place of the gratings of Islam would have been an obvious art known substitution of equivalents.

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Conclusion

The reference cited but not relied upon is also relevant to applicant's disclosure. The Evans reference also teaches an active fiber loop attached to a four-way coupler.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

JM
March 3, 2003